

ART. IV.—PERIODICAL AMNESIA; OR, DOUBLE CONSCIOUSNESS.

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INTRODUCTORY REMARKS.

I AM going to relate the history of a young woman whose existence is tormented by an impairment of memory, which is without a parallel in science. This impairment is of such a character that it suggests the question whether this young woman may not live two separate existences. Whatever may be the nature of the phenomena, I am about to describe, they deserve the careful consideration and reflection of psychologists, for if physiology cannot do without the study of maladies, neither can the study of the mental faculties, which is nothing but the physiology of the highest order of faculties, be carried on without an analysis of their lesions.

In view of a subject almost, or entirely new, experiencing some embarrassment in choosing a title, I have preferred to leave the choice to the reader. After the reading he can decide what designation he prefers. He will certainly be indulgent and pay close attention, for the terms and words which I shall make use of, are ordinary ones, changed somewhat, from their ordinary acceptation, and might occasion some obscurity.

Furthermore, I beg the reader to remember that, as a physician, I relate, to the best of my ability, an observation which belongs more to psychology, than to medicine, and, that being only a narrator of facts, I have not taken part for or against such a delicate solution as may be deduced from its analysis.

The reflections which conclude my communication are rather calculated to complete it, than lend color to a discussion. In

relating the fact, clearly and sincerely, I limit my ambition to adding my feeble contribution to the knowledge of man.

CASE.—Felida X. was born in 1843, in Bordeaux, of healthy parents. Her father, a captain in the merchant marine service, died when she was very young, and her mother, left in destitute circumstances, was obliged to work to bring up her children.

The first years of Felida were attended with trial, nevertheless, her development went on regularly.

Towards the age of thirteen, a little after puberty, she presented symptoms which denote the beginning of hysteria; viz., various nervous attacks, vague pains, pulmonary hemorrhages, which the condition of the respiratory organs did not explain. A skillful seamstress, of mature intelligence; she applied herself to her needle-working by the day. At fourteen and a half the phenomena began to appear, which form the theme of this recital; without any recognized cause, under the influence of some emotion, she would experience a keen pain in both temples, and fall into a profound languor, resembling sleep. This lasted about ten minutes; after this, she voluntarily opened her eyes, apparently awakening, and then would commence another condition, which we usually call secondary, which I shall describe hereafter. It would last an hour or two, then the languor and sleepiness would re-appear and she would return to the normal state. This kind of paroxysm returned every five or six hours, or less frequently, and her relatives and persons around her remarking the change in her manner during this sort of second life and her forgetfulness on her awakening, believed her to be insane.

Soon these symptoms of hysteria, properly speaking, were aggravated. Felida had convulsions, and the attacks of supposed insanity became more alarming. I was called to attend her, for, being at the time, assistant physician in the public asylum for insane women, it was natural that I should be called upon in a case supposed to be of mental disease.

The following are the symptoms, as I observed them in October, 1858 :

Felida is a brunette, of medium height, quite robust, and of ordinary stoutness of figure. She is subject to frequent

haemoptysis, probably supplementary. She is very intelligent, and tolerably well-educated for her social position; of a melancholy, and morose disposition. Her conversation is serious, and she talks but little. Her will is firm, and she is very diligent at her work. Her affections appear to be but little developed. She dwells on her ill health, which occasions in her serious pre-occupation of mind, and suffers acute pain in various parts of the body, particularly in the head. The symptom, called *clavus hystericus*, is well marked. One is particularly impressed with her sombre air, and the little desire she has to speak. She answers your questions, and that is all.

After a careful examination, from an intellectual standpoint, I find her actions, ideas and conversation to be perfectly rational.

Almost every day, without any known cause, or under the influence of an emotion, she is seized with what is called her "crisis"; in fact she enters into her second condition. Having witnessed this phenomenon hundreds of times, I can describe it with accuracy. I have been speaking in accordance with that, which was related to me. I am now going to describe what I have actually seen.

Felida is seated, some sewing lying upon her knees; all at once, without any premonition whatever, after a more than usually violent pain in her temples, her head falls upon her breast; her hands cease to move and hang helplessly by her side; she sleeps, or appears to sleep, but it is a sleep of such a peculiar character, that neither noise nor excitement, pinching nor pricking, can awake her. This kind of sleep is instantaneous, lasting two or three minutes; formerly much longer. Felida awakens, but her intellect is not what it was before she fell asleep. Everything appears different. She raises her head, and, opening her eyes, smilingly salutes new comers; her countenance brightens, and indicates only happiness. Her talk is quick, and humming an air the while, she resumes her needle-work, which was commenced in the preceding state. She rises, her step is elastic, and she does not complain of the thousand pains which, but a few moments before, caused her

to suffer. She applies herself to the ordinary duties of the household, goes out, circulates through the town, visits her neighbors, taking her work with her, and her gay manners are those of a young woman in her most vigorous years. Her character is completely changed; formerly melancholy, she has become cheerful; even gay, her vivacity sometimes even bordering on wildness. Her imagination is very vivid. From the slightest cause, she is overcome with emotions of sadness or joy. Instead of being indifferent to everything, as she was, she has become sensitive in the extreme.

In this condition, she remembers perfectly all that has passed during similar preceding states, and also during her normal life. I will add, that she has always maintained that the state, whatever it may be, in which she is when one speaks to her, is the normal one, which she calls her "reason," in opposition to the other which she calls her "crisis."

In this life, as in the other, her intellectual and normal faculties, although different, are unquestionably complete, each frenzied idea, each perverted perception, each hallucination. I will say, even, that in this second condition, all her faculties seem to be more fully developed—more complete. This second life, wherein no physical pain is experienced, is far superior to the other, and especially so on account of the important fact which we have already brought to notice, that while it continues, Felida remembers not only that which has taken place during previous attacks, but also during her entire normal life, whereas, and I shall refer to it again later, during her normal life she has no recollection of that which took place during the attacks.

After a period which, in 1858, lasted three or four hours, almost daily, Felida's cheerfulness suddenly disappears. Her head falls upon her breast, and she relapses into that state of torpor which we have described. Three or four minutes elapse, and she opens her eyes, to enter again into her ordinary existence. One can scarcely realize it, because she continues her work with zeal, almost with obstinacy. It often happens that a piece of sewing undertaken in the preceding period, she does not understand, and it causes her

a great mental effort to comprehend it. Nevertheless, she continues it as well as she can, at the same time lamenting her unfortunate situation. Her family, who are accustomed to this state of things, set her to rights.

Some minutes before, she sings a romantic song, and if we ask her to repeat it, she does not know what we are talking about. They speak to her about a visitor whom she has just received, but she has seen no one. I believe I am able to define the limits of this amnesia. The forgetfulness relates only to those things which transpired during the second condition. Every general idea acquired prior to this, is unaffected. She knows perfectly well how to read, write, and keep accounts, cut out work, sew, and a thousand other things, which she has known before being sick, or which she has learned in the preceding normal periods.

Since 1858, I have remarked it, and I have verified it later upon invitation of M. M. Liard and Marion, professors of philosophy. These psychologists who were kind enough to enlighten me with their advice, have enabled me to comprehend the importance of this characteristic, for in some celebrated cases of double consciousness, the oblivion extends back over all the past life, including all the general ideas of it. This was the case with the American lady mentioned by Macnish*.

Physically Felida is a very marked hysteric. She has *globus hystericus*, her tactile sensibility is perverted, her sense of taste abnormal, for I have been able to make her masticate pills of nauseous taste without her detecting it. Her sense of smell is less acute, and a number of points on the surface of her body are anesthetic. Finally, from the least emotion she has convulsions without complete loss of consciousness. I will not dwell upon this picture so well known; it will suffice to say that Felida certainly has hysteria, and that the singular symptoms which she presents should be considered as dependent upon this singular malady. At this epoch there is exhibited a third condition which is only an epiphomenon of the attack. I have witnessed this condition only three or four times, and in the course of sixteen years her husband has wit-

* Macnish, *Philosophy of Sleep*, page 215.

nessed it only about thirty times. Being in her second condition, she falls asleep in the manner described, and instead of awakening in the normal state as usual, she finds herself in a peculiar state, which is characterized by an indescribable terror. Her first words are: "I'm afraid! I'm afraid!" She does not recognize any one excepting the young man who has become her husband. This state somewhat delirious, continues only a short time. This is the only time when I have been able to detect in her perverted conceptions. I could interpret hallucinations of hearing and smell; certain hyperesthetic conditions of these senses, but a careful study has demonstrated to me that exaltation of these senses alone, enables her to hear conversation and noises, and to perceive odors that no one around her could hear or perceive. The history of hysteria is full of such cases. I will not dwell upon it. If I have had doubts in reference to the separation of the two existences, they have been removed by what I am going to relate. A young man of from eighteen to twenty years of age, was acquainted with Felida X. from infancy, and visited the house frequently. These young people having a strong affection for one another became engaged. One day Felida, sadder than usual, said to me with tears in her eyes that her malady was growing worse, that her abdomen was enlarging, and that she had nausea every morning; in a word, she gave me a most perfect description of a commencing pregnancy. The uneasy conduct of those who surrounded her, caused me to have suspicions which were soon confirmed. In fact, in the attack which followed, soon after, Felida said to me in the presence of these same persons; "I recollect perfectly what I have just said to you. You ought to have easily understood me. I confess it without evasion. I believe I am pregnant."

In the second life, her pregnancy did not disturb her mind. She took it easily. Having become *enciente* in her second condition, she denied it in her normal condition, and was aware of it only in similar states. But this ignorance could not last long. A neighbor to whom she made a full confession and who, being skeptical, could not but believe that Felida was acting a comedy, brutally reminded her of her confidence after

the attack. This discovery made such a deep impression upon the young girl, that she had very violent hysterical convulsions, and I was obliged to attend her for two or three hours. The child conceived during the attack is sixteen years old to-day. We will refer to it again later. At this time, (1859) I related this circumstance to several *confrères*. Most of them believed me to be the victim of delusion or of imposture. Only three prominent men, after having seen Felida X. with me, encouraged me to study her case. Parchappe, the celebrated alienist; Bazin, physician-in-chief to the public asylum for women, and Professor in the Faculty of Science in Bordeaux, and M. Gintrac, sen., director of *l'Ecole de Médecine*, and correspondent of the Institute. With all the others, science was complete, and everything which was outside its prescribed limits, could be nothing but delusion.

For these advanced minds, this case contributed to complete that part of science which pertains to the delicate study of brain-functions, and no fact should be overlooked. M. Bazin put into my hands a book, almost unknown in France; viz., "Braid's Neurypnology, or the Nervous Sleep," wherein hypnotism is described. It is the reading of this book which gave origin to those researches which occupied the learned world at the close of the year 1859, and which I resumed in 1860, in the *Archives de Médecine et de chirurgie*, and in the *Annales médico-psychologiques de Paris*. These remarkable researches by Velpeau, in the Institute, have been confirmed by M. M. Broca, Follin, Verneuil, Alfred Maury, Baillarger, Lasègue, etc., and have fallen into a sort of neglect only, in consequence of their unfortunate analogy with the practices of animal magnetism, which have been justly denounced.

It is upon Felida X * * * *, and particularly upon one of her friends, Maria X * * * *, that I have made the experiments which, form the basis of this study, that according to Braid, and numerous other older authors, has established the action of a convergent strabismus upon the cerebral functions as much in man as in animals.

In order not to depart from my subject, I will describe

what I have observed in Felida, pertaining to hypnotism. Felida being in one of her second conditions, and seated opposite to me, I asked her to look attentively at an object, placed 15 to 20 centimetres above her eyes. After eight or ten seconds, she winked and closed her eyes. For a few moments she did not answer questions, the sleep in which she appeared to be, separating her completely from the external world. She is anaesthetic; after a short time answers questions, and presents this peculiar phase, that in this induced somnambulism, or whatever may have been her condition when she was asleep, she is always in the normal state. Then she presents the ordinary phenomena of somnambulism, catalepsy, anaesthesia, hyperesthesia of the skin, exalted sense of smell, touch; exaltation of the muscular sense; all of these phenomena easy to produce by the procedure indicated, even in animals (hens, cats, etc.,) upon which I will not dwell in this place.

The awakening is produced with the same facility, by means already known, frictions or insufflation upon the eyelid.

If after having read Braid's book, wherein a number of cases are reported, (in which I have little faith) I have provoked in my patient the artificial sleep by means which he recommends, it was, I ought to say, with the hope of curing her; this hope has not been realized, for I have produced no change in her.

The existence in one patient of a spontaneous phenomenon—the transition from one condition to another—led me, naturally, to consider hypnotism, which as well as somnambulism, which everyone is familiar with, can be spontaneous. Examples of it are not rare. Many cases are known. I will cite only a few.

In the beginning of the year 1875, M. Bonehut observed in his employ, a young woman, who fell into somnambulism, with catalepsy, every time that she worked button-holes—a difficult work, as it requires constant attention and a fixed gaze. This was a hysteria, which hypnotized itself voluntarily.

M. Baillaiger cited in my presence, in the Medico-psycho-

logical Society of Paris, the case of a young woman, who was seized by catalepsy, while looking at herself in the glass. I could name an eminent clergyman of the reformed church, who fell asleep at will for half an hour, by closing his eyes and moving his ocular globes upwards and downwards. Here the phenomena are completely at the will of the individual.

In conclusion, nine or ten years ago, a young woman who came under my care in the *clinique*, for a tumor of the breast, fell asleep in broad daylight, for three hours; nothing could awaken her. Interrogated, she related that a certain time in the month, she is subject to these sleeps, during which she is anaesthetic, but not somnambulistic.

I shall draw no inference from these facts. They formerly appeared marvelous. To-day they are all included in science.

I have just described the condition of Felida, in 1858 and 1859. At the end of the latter year, the phenomena seemed changed for the better. At least I am told so. She was confined happily, and nursed her child. At this time, occupied by other studies, I lost sight of her completely. She had married the young man of whom we have spoken. Now, this young man, who is very intelligent, has observed carefully the condition of his wife from 1859 to 1876. His information fills up a gap of sixteen years, which occurred in my personal observation.

Here is a *résumé* of that which took place during these sixteen years.

Toward the age of seventeen and a half years, Felida passed through her first confinement, and during the two years which followed, her health was excellent, no particular phenomena having been observed. Toward nineteen and a half, the symptoms already described, re-appeared, with modified intensity. One year later, there were a second pregnancy, considerable pain, and spitting of blood, and various nervous symptoms, incident to hysteria, such as attacks of lethargy, lasting three or four hours. At this time, and up to the age of twenty-four, the paroxysms occurred more frequently, and their duration, which was at first equal to the period of normal life, began to exceed it. Pulmonary hemorrhage, which con-

tinued up to the last-mentioned time, became more frequent, and considerable. Felida was seized with partial paralysis, attacks of lethargy, ecstasy, etc., all phenomena due, as every one knows, to the hysteria which controlled her temperament. From twenty-four to twenty-seven, our patient had three complete years of normal life. After this time, and even up to 1875, that is to say, during the six last years, the malady has re-appeared in a form which I shall soon describe. I will add, that during these sixteen years, Felida has had eleven pregnancies, or miscarriages, including the one of 1854, and only two children are living.

Further, I ought to mention an important peculiarity. The second condition—the period of attack—which in 1858 and 1859 occupied only about a tenth part of her existence, has increased little by little in duration; has become equal to the normal life; then has exceeded it, arriving gradually to the actual state in which, as we shall see, it constitutes almost the entire existence.

In the early months of 1875, the Academy of Medicine in Belgium, occupied by the case of Louise Lateau, commissioned M. Warlomont to make a report upon the subject. This work, very well done, dwells upon the scientific reality of the phenomena, known as *doublement de la vie, double conscience, condition seconde*, states which may be voluntary or induced. M. Warlomont reports celebrated, but quite rare facts. I recognize in these, analogies of my own observation in 1858, although from that epoch I had appreciated the importance of it. I did not publish it, as I considered it too much isolated in science, or too much out of the domain of surgery, of which I was then professor at Bordeaux.

I then went to work to find Felida X * * * again, and I found her, presenting the same symptoms as formerly, but in an exaggerated degree.

Felida X * * * is now thirty-two years old. She is mother of a family, and carries on a grocery. She has only two living children; the oldest, conceived, as we have said, during a period of attack, has the nervous temperament of its mother, is intelligent, and an excellent musician. He has nervous

attacks, without complete loss of consciousness, and after these nervous crises, indescribable terrors, which recall the third stage, which we have described. Evidently this child, who is sixteen years old, suffers from the influence of morbid inheritance. Physically, Felida is thin, without wearing a sickly appearance.

On my arrival, having recognized me, she consulted me eagerly, in reference to means of escaping from her sad situation.

Here is what she told me. She is always sick, that is to say, she suffers continually from loss of memory, which she inappropriately calls her crises, only these supposed crises, which are all only periods of normal existence, have become much more rare. The last dates back three months. Meanwhile, this loss of memory, which characterizes them, has caused her to commit such blunders in her intercourse with her neighbors, that Felida retains the most painful remembrance of it, and is afraid of being considered insane.

I examined her in reference to the soundness of her intellectual faculties, and found no change in them. Nevertheless, in that which she has just said to me, I detected easily that she remembers very well what transpired during that period which she called her last crisis, and this soundness of memory led me to reflect. There was occasion for it, for the next day her husband, from whom I received a visit, said to me, that the condition in which Felida has actually been for more than three months, is the condition of attack, or the *condition seconde*, although she supposes the contrary to be the fact. In fact it appears to her now, as formerly, that the state in which she finds herself is always the state of *reason*. The recollection which I had of the past, made it clear to me. Only, since I ceased to study her, the periods of normal life have become more and more rare, and shorter and shorter in duration, so that the second condition occupies almost her entire existence. From this time, realizing how much there was of the remarkable in a state, which in sixteen years had changed so completely the mode of the being and personality of my patient, I studied her almost every day, with the

intention of publishing her history. To avoid tediousness, I shall relate only the principal facts of my study, those at least, which are characteristic. On the 21st of June, Felida, who is evidently in the second state, relates to me, that from four to five days, she has had on the same day, three or four lesser attacks, from one to two hours each. During this time, she lost all recollection of her ordinary existence, and at such moments she is so wretched in this singular condition, that she contemplates suicide. She was then, she says, certainly insane, for she ignored that I had seen her before. She entreated me even, if by chance I should see her again in a similar condition, to act as if I saw her for the first time, inasmuch as a new reminding of her infirmity would increase her mortification.

She was sensible that at the time her character was much changed. She became, she says, wicked and provoked violent scenes in her home. Guided by the memory of the past and by her husband's familiarity with these changes, it is very easy for me to recognize that Felida is in the second condition, though she supposes the contrary.

As formerly, in fact her conversation is brief, character decided, and natural manners relatively gay and careless. It is the same gaiety of sixteen years ago, but tempered by the reason of a mother of a family.

I believe, I ought to give here certain episodes in the life of our patient related by herself. They will serve to give an excellent and complete idea of her condition.

During the summer of 1874, in consequence of a violent emotion, she was taken by what she wrongly termed her crisis, which lasted several months without interruption, during which she as usual lost her memory, in fact, her husband said to me that she had at this epoch a period of normal life, which lasted so long that he hoped for her recovery. Two years ago, being in her ordinary state, (that is to say, in the second condition) she was returning in a coach from the obsequies of a lady of her acquaintance. On her way home, she felt that period which she calls her crisis, (normal state) coming on. She was drowsy for a few seconds, without the ladies who were with

her in the coach perceiving it, and awakened in the other state absolutely ignorant why she was in a funeral coach, with persons, who according to custom, were speaking of the qualities of the deceased, whose name she did not even know. Accustomed to these situations, she listened. By skillful questioning she succeeded in making herself acquainted with the circumstances, and no one could suspect what had transpired.

One month ago she lost her sister-in-law by death, after a long illness. Now, during one of these normal states of which I have spoken above, she had the mortification of absolutely forgetting all the circumstances of the death. She knows only by means of her mourning that her sister-in-law, who she knew was sick, is dead. Her children took their first communion while she was in the second condition. She had the mortification to forget this fact during her normal period. Between the former condition of our patient and the present, I ought to note a certain difference. Formerly she lost her consciousness entirely during the short period of transition. This loss was so complete, even, that one day in 1859, she fell down in the street and was picked up by passers-by. After awakening in the other state, she thanked them, smiling, and naturally they could not comprehend the cause of her singular gait.

It is no longer so now. This period of transition has diminished little by little, and although the loss of consciousness may be as complete, it is so brief that Felida can conceal it in whatever place she may be. This period presents a strong analogy to that which we call in medicine *le petit mal*, which is the least of the forms of epilepsy. However, with this difference, that *le petit mal* is absolutely sudden, while certain signs known to her, such as pressure in the temples, indicate to Felida the return of her attacks.

This is what takes place. When she feels them coming on, she raises her hand to her head; complains of a dazzling before the eye, and after an inappreciable time, passes into the other state. She can thus conceal what she calls her infirmity. This dissimulation is so complete that amongst the persons around her, her husband alone is cognizant of her condition at the time. Others perceive only the change of character, which

I ought to say is very well marked. We shall dwell upon these variations which Felida herself describes, with the greatest frankness.

In the period of attack or her second condition, she is more haughty, more *insouciant* more attentive to her toilet. She is less industrious, but much more sensitive. It seems as if, when in this state, she bears towards those who surround her, a deeper regard.

Are these variations from the normal condition due to the fact that in this latter condition she loses her memory, while in the second she recovers it? This is probable, but we shall return to it later.

Some days after (July 5th) entering the house of Felida, I was impressed with the sadness of her countenance. She saluted me ceremoniously. She seemed to be astonished at my visit. Her demeanor struck me, and I surmised that she was in the period of normal life. To ascertain the certainty of it, I asked her if she remembered the last time we saw each other. "Perfectly," responded she, "it was about a year ago. I saw you stepping into your carriage in the *Place de la Comédie*. I think you did not see me. I have seen you at other times but rarely since the time you came to attend me before my marriage." It was certain Felida was in the normal state, for she knew nothing about my last visit made, you will recollect, during the second condition. I questioned her and learned that she is in the "reason" (she says only to-day) since 8 o'clock in the morning. It is about 3 o'clock p. m.

Profiting from an occasion perhaps difficult to be met with again, I studied her condition with care. Here is a *résumé* of my observations: Felida suffers from melancholy verging on despair, and communicates to me the cause of it in most eloquent terms. Her situation is very sad and any one of us taking it home to himself, can easily imagine what would be his life to-day, should he be suddenly cut off from the remembrance of the occurrences of three or four preceding months. Everything is forgotten, or rather, nothing exists. Business, important circumstances, acquaintances formed, information given, all are leaves of a chapter rudely torn from a book. It is a gap which it is impossible to fill up.

Felida's remembrance reaches, as we know, only to facts which have existed during similar conditions—the eleven confinements for example.

I am here going to make a remark which is of considerable importance. Eleven times Felida has been a mother. Each time this physiological act of the first order, completed or not, has been consummated during the normal state. I asked for the day of the month. She thought a while, and made a mistake of about a month. I asked her where her husband was. She did not know—did not know when he left her, nor what he said upon leaving. At 8 o'clock, the normal state came on and he had left a quarter of an hour before.

Near her is a little dog. She does not recognize him; has seen him this morning for the first time. Yet the actions of the dog indicate that he is an old inmate of the household.

I should only have a choice of examples of the same order should I proceed to cite them, but those I have enumerated are, I believe, sufficient. Besides these modifications which proceed directly from the absence of memory, I remark other differences between the normal state and the period of attack.

The affections are no longer of the same nature. Felida is indifferent and manifests little affection for those around her. She revolts at the natural authority which her husband exercises over her.

He is forever saying "I want this or that. I don't like it. It must be that I have allowed him to acquire this habit while I have been in my other state." "That which distresses me," added she, "is, that it is impossible for me to conceal anything from him, although in fact, I have nothing in my life which I desire to conceal. If I wished to conceal anything, I could not. It is certain that in my other life, I have told him all that I thought."

Furthermore, her manner is more lofty—more entire. What troubles her particularly is the relative incapacity which her absence of memory creates; especially in that which pertains to her business.

"I make mistakes in the value of commodities—selling them without regard to cost, and I am obliged to resort to a thousand subterfuges for fear that I shall be taken for an idiot."

Three days later her husband related to me that the state of complete reason, of which I have just spoken, lasted from 8 o'clock a. m. to 5 o'clock p. m. From this time she is in the second condition, for a period the duration of which he can not foresee.

He added an interesting detail. It has happened several times that falling asleep in the evening in the normal state, she awakens in the morning in the state of attack, without her husband or herself knowing anything about it; the transition has therefore taken place during sleep.

It is well known that some epileptic seizures have occurred during sleep, and that neither the patient nor the physician could be aware of it, except by the extreme exhaustion which the patient experiences in the morning upon awakening. There are even epileptics who have never had an attack except in sleep, and who consequently have never realized their situation.

At the time when I published this study, the condition of our patient is modified. The periods of normal life continue only two or three hours at most, and show themselves every two or three months.

REFLECTIONS.

I.

I believe, I ought to add to the record of this case a few reflections, which will perhaps aid in the interpretation of it. How are we to characterize the condition of Felida X *** ? Does she exhibit a duplicate personality, a double life? Is it a case of double consciousness, or is there an aberration of memory which involving the memory alone leaves intact the other faculties of the mind? If, in whatever condition she may be, Felida is asked what she thinks of herself, she does not believe and has at no period of her life believed that she is another person. She has the consciousness that she is always like herself; she does not, therefore, correspond to the definition of M. Littré, who says:

“Double consciousness is a state in which the patient has either the sensation that he is double, or without having the

knowledge of his doubleness really has two existences, which have no remembrance, the one of the other—and ignore each other respectively."

Felida has not this idea, and in one of her existences she has a perfect remembrance of her two lives.

Neither does she believe herself to be another person like the woman whom Carpenter mentions in his "Mental Physiology," who, believing herself to have become an old clergyman, thought it ridiculous that this *clergyman* should propose marriage to her.

Neither does she resemble the clergyman cited by Forbes Winslow, who was conscious of two personalities, the one good, the other bad. Nor the American lady of Mac Nish, who, at a given moment, in consequence of a voluntary sleep forgot all her former life and what she had learned during this life; reading, writing and music, and who was obliged to recommence her education and continue until the normal state and her former education returned simultaneously. We have seen that the amnesia of Felida has never influenced the series of general ideas and notions formerly acquired.

Felida does not represent any of these three types, which correspond quite closely to those states called reduplicated personality, double life or double consciousness; these terms being those which even to this day are employed by authors, especially quite lately by MM. Warlomont and Littré.

It is probable that an exact analysis of facts would show these terms to be synonymous.

In *résumé* what is there peculiar in the history of this woman?

I know that she appears to have two lives, but is not this only an appearance? an illusion which the loss of memory characterizing her normal state presents to the observer?

Let us seek, again, analogies.

Persons who are subject to attacks of natural (uninduced) somnambulism do not remember on awakening what transpired during sleep. The same is true in the case of Felida, but no one has seen somnambulism so perfect, for in the state which

corresponds to the state of somnambulism she does not sleep, she lives and thinks completely, this life being even superior to her normal life, for only while this period lasts does she have any complete realization of her existence.

I will say as much of somnambulism provoked by converging strabismus or otherwise; this somnambulism as well as natural is also, in the strict sense of the word, a second condition. It resembles in the amnesia the condition of Felida, but is not an exact reproduction of it. Thus persons who are subject to it have no will, whether they present anaesthesia, hyperaesthesia and other changes, or want of equilibrium in the sensorial functions or muscular sense, which have nothing in common with the functional integrity in which we find Felida in the corresponding condition.

There are other second conditions, artificial or pathological, which merit consideration.

Alcohol, hashish, belladonna, opium, provoke conditions in which those who are subjected to them think and act without preserving the remembrance of it, as soon as the operation of these drugs has ceased.

The delirious from insanity, epilepsy or temporary disease, appear also to have two lives, the one of which is rational, and in which as a general thing they have no recollection of that which has taken place in the other. But here the analogy ceases, for in these conditions, ideas expressed or deeds accomplished are irrational, not simply because they are expressed or accomplished apart from that, which we call reason, but because they in themselves are not the result of conceptions logically coordinated. These states are properly speaking defects in life, morbid manifestations, lapses. With Felida on the contrary (and we cannot dwell upon this too much), the state of attack or second condition is a complete existence, perfectly rational, so perfect that no one, even knowing the circumstances, could discern which of these two states is superadded, were he not guided by her husband or by myself.

If it were necessary to corroborate these differences by still further argument, we would compare the two states of Felida from the standpoint of legal responsibility.

We do not think that any enlightened judge can incriminate an act committed in one of the second conditions, which we have just enumerated. The patient, the insane, the epileptic, the somnambulistic, are irresponsible; the inebriate is such, in a certain measure. Would it be the same with Felida, if, in one of her second stages, she should be guilty of a criminal deed? The question should be stated and discussed, but it must be admitted that it is not easy to solve.

To him, who would say that she is not responsible, one could reply, that a person who, for whole months, is in the same intellectual condition, besides being perfectly sound, should have consciousness of, and, consequently, responsibility for, her acts—although it may happen that, at the time of judgment, she may not preserve a remembrance of them.

To him, who would maintain that the patient is responsible, one might reply, with equal reason, that it would be impossible to condemn a person whose intellectual functions are so altered.

In fact, the unity of self being admitted, such a person can not have a perfect consciousness,—especially, if we remember, the third stage of which we have given the rare but certain manifestations.

Furthermore, he who cannot remember an accomplished act, though it may be recent, cannot be *compos mentis*, as it is understood in law.

If, then, for other second conditions, irresponsibility is admitted, in that which affects our patient, it is certainly admissible.

II.

We believe that we have shown that the second condition which we are considering, is not of the same nature with analogous conditions already observed—or, rather, already published. It remains for us to examine whether amnesia is not the sole cause of the difference which the two states present, and if, as we have stated above, it is not this which accounts for the apparent doubleness of life.

It is certain that the character and affections of Felida are not the same in the two states.

Given the knowledge we have of her deportment, what is the significance of these differences ?

Let us not forget that, prior to the disease, and during the periods of normal life, which reproduce exactly the anterior state, Felida was, and is, naturally serious and melancholy.

In the second condition, she is gay and frivolous, more pre-occupied with her toilet and a thousand other trifles. But is not this gaiety, this change of character, natural ? In fact, in this state her memory is perfect. It embraces the entire life. Felida knows that she will lose her memory, that she will have lapses; but this thought is nothing in comparison with the painful situations in which she is placed by a sudden amnesia, which erases entire months of her existence, and mortifies her pride by exposing her to the chance of being considered insane or imbecile. In her second condition, her affections are more developed; but is this not also a direct consequence of her great freedom of mind ? She is less occupied with herself; therefore, she takes more interest in those about her. When she is in her normal state, having the consciousness of her sad situation, she dreams, so to speak, only of herself. Every one knows the egotism of old people and invalids. There is no other cause for it but the realization of their weakness. Strong and comparatively well, Felida has sentiments belonging to the strong—love of others, devotion, generosity.

In this condition, her character is more supple, and she complains less of the legitimate authority which her husband exercises over her. Is this not also natural ? It is natural to endure willingly that which we like.

With regard to her greater frivolity and attention to her toilet, they proceed directly from her increased freedom of mind, and from the fact already noticed, that, during these periods, her physical pains do not exist, so to speak, any more. Persons who suffer do not care for their toilet, and often find in assiduous work a solace for their sufferings; and, at these times, Felida is not obliged to seek for this kind of solace.

Moreover, if in these second conditions, Felida is gayer and more frivolous, less industrious, if she appears to be more attached to those about her, it is only in comparison with what

she is in the normal state—for I ought to dwell upon it that what we observe in her in this respect is nothing extraordinary. She is at these times only like other women or girls, in whom no one would think of remarking anything unusual.

One might consequently affirm that in the case of Felida X ***, the memory alone is the seat of disorder, that the change of character and affections are only consequences of an alteration of this faculty.

I will add that this alteration of memory—this amnesia—is periodical. In fact, in the normal state the memory takes a stride, leaping over the periods of the second condition, to unite together the periods of this condition, however wide apart they may be.

III.

If it be correct to assume that in the case of Felida, the memory alone is affected, and everything proves it, can we not draw an argument from this in favor of a localization of this faculty, in some particular part of the brain?

We have no preconceived idea upon the subject of the localization of the intellectual functions, and we consider as fancies most of the attempts made to this end. Nevertheless, we must recognize in the preceding facts at least a presumption. In fact, the alteration of the memory alone, the other faculties remaining intact, is a preliminary step towards this conclusion, just as an alteration in the faculty of articulate speech, other faculties remaining intact, has led by degrees M. Broca, and other observers, to localize this function in the third frontal convolution of the left anterior lobe.

The arguments which led to this conclusion are as follows:

1st. Alteration of this faculty, all the others remaining intact; hence the probability that it has for its instrument an *isolated*, special part of the brain.

2d. *Concomitant* alterations of a part of the brain, limited, and always the same.

In that which relates to the memory, we know, at present, only the first of these terms. May it not lead us to the other? Let us seek similar facts as the preceding, and not lose opportunities to make necroscopic studies of them.

There is a point in this history upon which, I think, I ought to dwell, for it is of universal application. I wish to speak of the striking manner in which it proves the importance of memory.

Theoretically, every one knows its importance, but never, perhaps, will it be more vividly and practically illustrated, for no one by self-examination could arrive so clearly at this conception, as by the study of this young woman.

One can hardly realize the singular impression made upon an observer by a person who, like Felida, forgets everything that has passed, everything that she has seen, everything that she has said, and everything that has been told her, during three or four preceding months. She does not awaken from a dream, for a dream, however incoherent it may be, is always something; she comes out of intellectual non-existence, and if, like most delirious persons, she had not lived intellectually during this period, the gap would be of little importance. But, during this time, her acts have been complete and rational. Time has advanced; her life, and everything about her, have advanced with it.

I have above compared this existence with a book from which pages had been torn at intervals; this is not sufficient, for an intelligent reader, imbued with the general spirit of the book, might supply these gaps, while it is absolutely impossible for Felida to have even a suspicion of any event, which had transpired during her second condition. How should she know, for example, that during this time she had contracted a debt, received money, or that an accident or a sudden illness may have taken away her husband or her children? She will not find them about her; she will await their return.

The traveler who remains three or four months away from his country without receiving letters or news, has an idea of the time which has elapsed. He may be astonished at what has happened during this interval, but he knows that something must have taken place. He looks forward to gaining information concerning it. To him time has advanced, while, when after four months of the second condition, Felida has one day of the normal state, during this day she has no recollection

of the preceding months, and does not know how long this period has lasted. One hour or four months are all the same to her.

Thus, in her appreciation of time, she is deceived in the most remarkable manner—sometimes passing over entire months. She is always behind time. In a word, if the figure is allowed me, her calculation is behind time. The almanac even is of no use to her, for she has no basis to start from in consulting it. Her husband or her account-book, in referring back day by day to some sale which she remembers, enlightens her as to the present time, and, also, as to that in which her period of amnesia began.

I have left to the reader the task of deducing the thousand consequences, and the thousand accidents which might arise in an existence so divided. Our role is not to imagine situations of more or less exciting interest. It is restricted to relating the truth.

We believe, we ought here to anticipate one objection. In reading this history, and studying Felida at the present time only, one might be tempted to think that I had failed to appreciate the true situation of our patient, and that the normal state—the state of reason—is that in which the memory is complete; that in which she has perfect possession of herself, and that the abnormal state is that which is characterized by amnesia. One would be deceived for this reason.

First of all, having witnessed the attacks at their very inception, and watched their growth, I can affirm the identity between the early accidental condition which lasted one hour in a day, and the condition of almost constant attack of the present, which lasts three months against one day of the normal condition.

Furthermore, the absence of memory is a pure criterion of the integrity of the intellectual functions, for forgetfulness is not necessarily induced by an incomplete or abnormal intellectual condition, at the moment when one tries to recollect. Generally, amnesia is produced by the slightness of the impression made upon the mind by an event at the time of its occurrence.

One does not forget because one cannot remember, but because the fact forgotten made only an insufficient impression.

The man who, after a delirium of some hours, does not remember after he recovers what occurred during his delirium, is none the less sound. He was only incomplete and diseased when he was delirious, and it is because he was delirious that he lost all remembrance of everything which took place, his brain not having received a durable or adequate impression.

We believe, we ought to dwell upon another remarkable circumstance. At present, the second condition has so much increased at the expense of the normal life, that the *roles* between the two periods have become inverted. Sixteen years ago, the attacks lasted only several hours in several days; they were an accident, a defect in life. At the present time, the second condition is, so to speak, the ordinary life, for it lasts three and four consecutive months against periods of the normal life, which have only three or four hours duration, and to-day the latter are the defect, the accident. It is to these that Felida owes the trouble of her life.

The essential character of these two conditions has not changed in the least. The duration alone has become changed. The one has simply increased at the expense of the other.

This modification, accomplished during sixteen years, suggests a reflection. Do not the gradual diminution in the duration of the periods of the normal state, and the greater and greater rarity of their appearance, presage that they will in time wholly disappear? This is certainly not impossible, it is even probable. But, then, what will happen? The second condition will constitute the entire life. Felida X*** will have a complete personality; intelligence, complete knowledge of the past—all will be there. But she will no longer have the same personality as before—she will be another person. She will be better off, for she will no longer have amnesia, but in fact she will have changed completely. Her existence, as seen above, will have presented the singular phenomenon of having counted three successive personalities; the first normal, which she brought with her, so to speak, when she came into the world; the second, divided into two

parts by amnesia; the third, a new existence, characterized by its integrity.

Thus the good resulted from the excess of the bad—for there was, in reality, a kind of recovery. I should not dare to hope for any other mode of recovery. If this modification should be consummated, it will be in twelve or fifteen years, at the age called critical, the ordinary epoch of the conclusion of hysteria. If I am permitted, I think I may prove it in the future.

IV.

What hypothesis can we form concerning the proximate cause of the amnesia which we have just described?

Let us see, if that which we know cannot put us upon the track of that which we wish to discover. The beautiful labors of MM. Claude Bernard and Luys, have established, beyond doubt, the action of the circulation upon the cerebral functions. Increase in the afflux of blood causes excitement of these functions, its decrease causes calmness and repose. Sleep is produced by this diminution, (ischemia) which is produced by the momentary contraction of the vessels which convey the blood to the brain.

Let us reason by analogy, and take, for example, a function whose localization seems to be determined—the function of articulate language. Well, if the vessels which convey the blood to the third convolution of the left anterior lobe, are diminished in calibre, this function will be altered, the others remaining intact. Hence, if the memory is destroyed, we are perfectly right in concluding that this change is due to a diminution in the quantity, in that part of the brain, yet unknown where this function is localized. Now, the abnormal state of Felida, through the operation of hysteria upon contractile tissues of the vessels, accounts perfectly for the diminution of their calibre. Such, at least, is my personal conviction.

That which takes place when sleep is induced in man and in animals, by obliging them to squint upwards or downwards, is a further proof of this. In the absence of a necroscopic

study, we can comprehend its mechanism by an analysis of this manœuvre; given a person, or an animal, placed under these conditions, the prolonged contraction of the muscles of the eye which move it upwards and downwards, compresses the vessels of the orbit, modifies their circulation, and, consequently, acts upon the cerebral circulation which is closely connected with that of the orbit. Is it not probable that the sleep or somnambulism which follows is thus produced?

The manner of awakening persons and animals subjected to this influence easily proves it. M. Puel proved, a long time ago, in a memoir honored by the *Academie de Medecin*, that spontaneous catalepsy yields to slight friction applied over the contracted muscles. After him, Braid's experience, and that of the world show that this artificial sleep is dispelled by friction over the eyelids. This friction acts evidently upon the contracted muscle, to relieve the contraction, as in other cases. Consequently the blood-vessels are relieved of all compression, the cerebral circulation is restored, and the person, or animal, re-enters the ordinary state. In *résumé*, let us suppose that amnesia in the case of this young woman has, as its proximate cause, a momentary and periodical diminution in the flow of blood to the part of the brain which presides over the memory. Let us suppose, further, that this momentary vascular contraction is due to the hysterical condition of our patient, a condition whose action is upon the contractile fibres of these vessels. This idea, which causes hysteria to play a new *rôle*, leads us to special, medical, and physiological considerations, which will find place in another treatise.

CONCLUSIONS.

1st. Felida X*** was attacked sixteen years ago with an alteration of the memory, which has all the appearance of the doubleness of life.

2d. This alteration is an amnesia which continues over periods of time of valuable duration.

3d. The memory passing over the states of the second condition, unites together all the periods of the normal state, so that Felida X*** seems to have two existences; the one, ordinary, composed of all the periods of the normal state, united

by memory; the second, comprehending all the periods of the two conditions, *i. e.*, of the entire life.

4th. The oblivion is complete, absolute, but it goes only so far as that which has transpired during the continuance of the second condition. It has not affected either the previous notions, nor the general ideas.

5th. Besides the amnesia, which is the phenomenon of the normal state, Felida presents, during the periods of the attack, modifications in character and affections, which are only the consequence of them.

6th. This alteration of memory, and the phenomenon which attend it, have for their cause a diminution of blood sent to that part of the brain, still unknown, where the memory ought to be localized.

7th. The momentary contraction of the vessels which is the instrument of this diminution, is produced by the hysterical condition of Felida X***.

[The above account by M. Azam, of the case of Madame X*** has excited considerable attention among medical psychologists in France, and has been noticed to some extent elsewhere, as by the editor of *Mind*, in a late number of that periodical. Although we think it has attracted an amount of attention it does not deserve, we insert it because of a certain scientific interest it has, and which in our opinion has not been as clearly discerned by the author, as it seems to us it may be. We have to regret, as in so many other cases, the absence of fuller statements, both negative and positive, as to the exact physical condition, and physical symptoms of the patient. But taking the case as it stands, it seems to us we may look upon it as follows: Of the two, the so-called "normal," and the "second" conditions, it seems to us neither should be called normal, except in that sense of the word which would signify a condition, customary or hereditary to the patient. But the so-called "normal" state is not so when compared with the ordinary type of mental health, for it is the one in which the fault of memory—amnesia—is alone present. Since in this case the defect of memory is psychologically the important one, the "second" condition would appear to be the most nearly

normal of the two, for in it she remembers events which have happened in both states, while in the "normal" state, as described by M. Azam, the patient forgets everything relating to her life during the continuance of the "second" condition. As to the general nature of the disorder, there can be but little doubt that the case is one of hereditary nervous disorder, including hysteria, and there is quite as little doubt in our own mind, that it is a peculiar case of epilepsy—the *petit mal*,—occurring under two forms, one of them quite frequently, at the time of transition from the "normal" into the "second" state and *vice versa*, and the other more rare, in which the patient has a period of confusion and alarm. It strongly recalls as regards its presumed epileptic aspect, a case we have had recently under observation.

But the most important feature of the case to our mind, is the amnesia, and the mode of its coming on and disappearing.

In the "normal" state, though the mental faculties appeared to be intact in other respects, yet the memory of events occurring during the "second" state, is abolished as we have seen. We agree with the author, when he intimates that we are obliged to infer from this fact, some limited region of the brain, as the organic seat of the memory of events belonging to the "second" state. But we are also obliged to infer, that the seat of memory for events belonging to the "second" state is in some way different from that appropriated to the other.

For, while the memory of events belonging to the latter state, is abolished, the memory of events belonging to the other is good. From such cases then, the doctrine of cerebral localization receives some support; in that we seem obliged to infer the existence of two cerebral localities for memory, to such a degree separate, that simultaneously one of them may be active and the other inactive. We are very far from imagining that by merely classifying the case as epilepsy, or hysteria, etc., that it has been explained, but it may be in this way deprived of a more or less fictitious appearance of novelty. If the amnesia of the case is genuine, as it seems to be, it may be referred, so it seems to us, to a vaso-motor affection of limited portions of the brain, with corresponding nutritive changes, so

as temporarily to abolish, or on the other hand "revive," the organic conditions on which the memory of certain events may be supposed to depend. And such considerations bring us once again to the localization of functions in the cortex cerebri, and to the other but closely related question of local or regional fluctuations in blood supply to the brain. So far as the case under consideration goes, it has nothing in it peculiar outside of what we have hinted at, in these brief comments.—Eps.]
